

New Coffee Shuttle 1 on first voyage

IF North Queensland Engineers and Agents' managing director, Don Fry, had his way, he would have an updated version of the company's new coffee harvester on the drawing board before the current model has even finished its field trials.

Not that there is anything wrong with Coffee Shuttle One, which made its first public appearance at a field trial near Mareeba recently, but Mr Fry believes it can be improved upon before releasing it on the world market, its ultimate destination.

Australia's first coffee harvester came to the Tablelands in 1982, when growers Nat and Dick Jaques imported a New Zealand berry picker and had it converted for coffee picking. This was joined two years later by a Brazilian machine, imported by a neighbour, Ben Colbran.

There was a general agreement at the time that the new Australian industry could only survive with mechanical harvesting, a belief borne out by the Tableland's coffee growers in the years which followed.

However, neither machine was ideally suited for the Tableland conditions, and that was when NQEA came into the picture. In collaboration with the Jaques brothers, and after considerable discussion, research and development, Coffee Shuttle One was produced.

Described as a new generation harvester, and with a price tag of \$250,000, the machine is destined for world markets, although Mr Fry

would prefer to see that tag reduced.

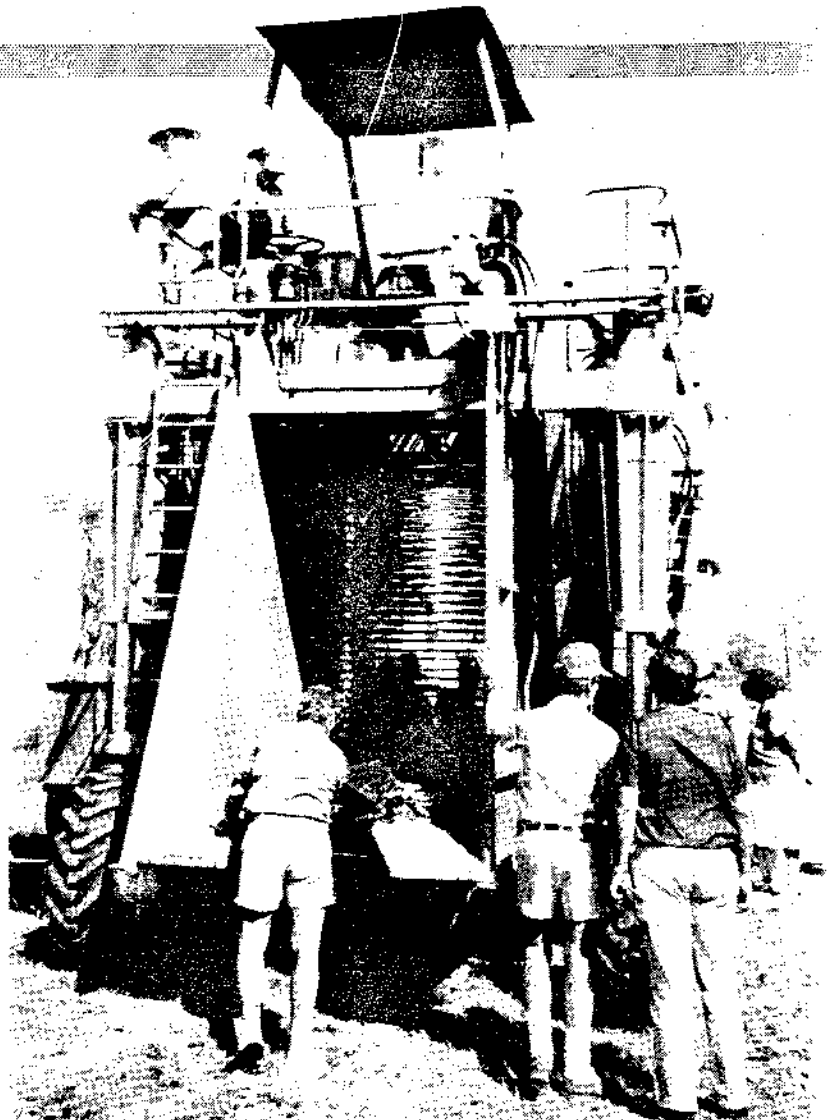
According to his criteria for world markets, that a machine must be workable and affordable, Coffee Shuttle One is half way there. It works, and works well, but he feels it could be made more affordable, probably through simplification of the design. So back to the drawing board.

But for NQEA's Alan Schwenke and Barry Spilsbury, the concern was not distant world markets but a coffee plantation on the Tableland, and for them Coffee Shuttle One was doing a good job as it rumbled along the rows of bushes, shaking the bright red berries into containers along the sides of the machine.

The machine, developed at a cost of \$500,000, spent a couple of weeks at the Jaques' plantation being 'debugged' in preparation for its first public appearance on the property of neighbour Bruno Moloberti, under the eyes of an intensely interested group of growers, tobacco farmers, and DPI personnel.

Its behaviour was impeccable, gathering up the berries, de-husking them, depositing the wet beans in a trailer via the new side-mounted hoppers, and doing a little jig as its self-levelling system came into operation on rough ground at the end of a row.

Everyone was impressed, from Nat Jaques, in his driver's seat nearly 4m above the ground, to the small boys who came with their fathers and who were allowed to climb up for a ride.



THE harvester is pictured during its field trials, complete with interested spectators. Nat Jaques, the driver, is standing on the top of the machine.

According to Alan Schwenke, the harvester is a considerable improvement on the earlier machines.

He said it still worked on the 'vibration' principle used in the earlier machines, with the harvester straddling each row of bushes and shaking or vibrating each bush between rotating fingers, causing the berries to fall into containers inside the machine.

Innovations in Coffee Shuttle One include a built-in husker, side-mounted hoppers which pivot out to unload the berries, the ability to harvest berries growing low down on the bushes and technical improvements like a reduction mechanism for oscillator speeds and control by the operator over the power output

of the 75 kW Perkins water cooled diesel engine.

With the new machine, accessories like tree-pruners can be attached if required.

There is a self-levelling system for use on rough ground, 4WD configuration, utilising hydraulic motors in each wheel, with front-wheel steering. The transmission is fitted with selectable diff lock. Operational braking is achieved hydraulically, with a park brake incorporated into the system. There is a wide range of speeds for both harvesting and between-farm travel.

The unit is controlled by one man, with one other worker needed to bring the husked berries from the field to the factory ready for processing.

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